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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/917,493
Filing Date: July 27, 2001
Appellant(s): JARVIS ET AL.

Charles W. Griggers
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/15/06 appealing from the Office action mailed 9/6/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,003,065	Yan et al.	12-1999
6,823,504	Sokolov	11-2004
6,763,499	Friedman et al.	7-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-19, 22-32, and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6003065 to Yan et al. as cited on Information Disclosure Statement dated January 8, 2002.

Regarding claim 1, Yan discloses a manager loadable printer comprising an application program (**226**) loaded on the printer, wherein a manager (**214**) invokes functionality on and receives results from the application program via an agent (**228**) remotely located from the application program (see Figs. 1-3, column 9 lines 26-56, column 10 lines 23-63, column 11 lines 7-19, column 18 lines 34-40 and 58-63, column 19 lines 23-57, column 22 lines 25-33, and column 23 lines 13-46).

Regarding claim 6, Yan discloses a method of instructing a printer having a virtual machine, the method comprising: providing an agent, the agent having an associated applet (see column 23 lines 13-65), loading the applet on the virtual machine (see column 23 lines 13-65), and executing the applet on the virtual machine, wherein a manager invokes functionality on and receives results from the applet via an agent remotely located from the applet (see Figs. 1-3, column 9 lines 26-56, column 10 lines 23-63, column 11 lines 7-19, column 18 lines 34-40 and 58-63, column 19 lines 23-57, column 22 lines 25-33, and column 23 lines 13-65).

Regarding claim 17, Yan discloses a printer comprising an applet (see column 19 lines 23-57, column 22 lines 22-33, and column 23 lines 13-65), a virtual machine capable of executing the applet (see Figs. 1 and 2, column 19 lines 23-57, column 22 lines 22-33, and column 23 lines 13-65), and an interface for communication between the printer and a remote agent, wherein the agent initiates management events including requesting amount of resources being utilized by each applet operating on the virtual machine (see Figs. 1 and 2, column 10 lines 24-55, column 15 lines 1-10, column 16 lines 15-19, and column 22 line 57-column 23 line 12).

Regarding claim 25, Yan discloses a method of instructing a printer having a virtual machine comprising: serving an applet to the printer (see column 22 lines 19-33), executing the applet on the virtual machine to produce a result (see Fig. 2, column 19 lines 33-57, and column 22 lines 19-33), communicating the result from the printer to an agent remotely located from the printer (see column 22 line 57-column 23 line 8), and communicating the result from the agent to a manager (see column 23 lines 13-65).

Regarding claim 32, Yan discloses a printer comprising an applet (see column 19 lines 23-57, column 22 lines 22-33, and column 23 lines 13-65), execution means for executing the applet (see Figs. 1 and 2, column 19 lines 23-57, column 22 lines 22-33, and column 23 lines 13-65), and an interface means for communicating between the printer and a remote agent, wherein the remote agent initiates management events to be performed by the applet including requesting amount of resources being utilized by each applet operating on the printer (see Figs. 1 and 2, column 10 lines 24-55, column 15 lines 1-10, column 16 lines 15-19, and column 22 line 57-column 23 line 12).

Regarding claim 2, Yan discloses the system discussed in claim 1, and further discloses wherein the application program comprises an applet served by a manager (see column 9 lines 26-30, column 10 lines 37-44, column 19 lines 23-57, column 22 lines 22-33 and 46-51, and column 23 lines 13-65).

Regarding claim 3, Yan discloses the system discussed in claim 1, and further discloses wherein the application program comprises an applet served by the manager and further comprising a virtual machine capable of executing the applet (see column 7

lines 3-15, column 8 lines 46-49, column 9 lines 26-40, column 10 lines 37-44, column 19 lines 23-57, column 22 lines 22-33 and 46-51, and column 23 lines 13-65).

Regarding claim 4, Yan discloses the system discussed in claim 1, and further discloses an interface for communication with the agent (see Fig. 2, column 9 line 63-column 10 line 10, and column 10 lines 24-28).

Regarding claim 5, Yan discloses the system discussed in claim 1, and further discloses wherein the application program comprises an applet comprising printer instructions (see column 11 lines 10-14 and 31-40, column 22 lines 22-33, and column 23 lines 58-61).

Regarding claim 7, Yan discloses the system discussed in claim 6, and further discloses communicating the executing step to the agent (see column 23 lines 13-65).

Regarding claim 8, Yan discloses the system discussed in claim 7, and further discloses communicating from the agent to the manager (see column 23 lines 35-37).

Regarding claim 9, Yan discloses the system discussed in claim 6, and further discloses wherein the applet includes print job accounting instructions (see column 23 lines 3-6 and 13-65).

Regarding claim 10, Yan discloses the system discussed in claim 6, and further discloses wherein the executing step includes print job accounting (see column 22 line 60-column 23 line 1).

Regarding claim 11, Yan discloses the system discussed in claim 6, and further discloses wherein the loading includes serving an applet to a printer via a network (see Fig. 1 and column 23 lines 13-65).

Regarding claim 12, Yan discloses the system discussed in claim 11, and further discloses wherein the network includes the Internet (see column 23 line 66-column 24 line 4).

Regarding claim 13, Yan discloses the system discussed in claim 6, and further discloses wherein the providing includes loading the agent on a workstation (see Figs. 1 and 2).

Regarding claim 14, Yan discloses the system discussed in claim 6, and further discloses wherein the providing includes loading the agent on a server (see Figs. 1 and 2).

Regarding claim 15, Yan discloses the system discussed in claim 6, and further discloses wherein the agent executes on a virtual machine (see Figs. 1 and 2).

Regarding claim 16, Yan discloses the system discussed in claim 6, and further discloses wherein the applet includes an instruction selected from the group consisting of alerting, embedding, configuring, setting, and combinations thereof 9see column 23 lines 47-65).

Regarding claim 18, Yan discloses the system discussed in claim 17, and further discloses wherein the interface comprises a protocol adaptor (see column 6 lines 52-56, column 6 line 63-column 7 line 3, and column 9 line 65-column 10 line 2).

Regarding claim 19, Yan discloses the system discussed in claim 17, and further discloses wherein the interface comprises a connector (see column 18 lines 40-57).

Regarding claim 22, Yan discloses the system discussed in claim 17, and further discloses wherein the interface comprises TCP/IP (see column 6 lines 52-56, column 6 line 63-column 7 line 3, column 9 line 65-column 10 line 2, and column 15 lines 62-67).

Regarding claim 23, Yan discloses the system discussed in claim 17, and further discloses wherein the agent communicates with a manager (see column 6 line 60-column 7 line 15 and column 8 lines 1-24).

Regarding claim 24 Yan discloses the system discussed in claim 17, and further discloses wherein the applet includes printer instructions (see column 11 lines 10-14 and 31-41, column 22 lines 22-33, and column 23 lines 58-61).

Regarding claim 26, Yan discloses the system discussed in claim 25, and further discloses wherein the serving includes loading the applet into memory on the printer (see Fig. 2 (216), column 8 lines 25-30, and column 9 lines 26-30).

Regarding claim 27, Yan discloses the system discussed in claim 25, and further discloses initiating the executing via a manager and the agent (see column 22 line 57-column 23 line 65).

Regarding claim 28, Yan discloses the system discussed in claim 25, and further discloses communicating arguments from a manager to the agent (see column 22 line 57-column 23 line 65).

Regarding claim 29, Yan discloses the system discussed in claim 25, and further discloses wherein the communicating from the printer to the agent includes communicating via a network (see Fig. 1, column 6 lines 52-56, and column 23 lines 13-46).

Regarding claim 30, Yan discloses the system discussed in claim 25, and further discloses wherein the serving includes serving an applet to a plurality of printers each having a virtual machine (see column 22 lines 46-51).

Regarding claim 31, Yan discloses the system discussed in claim 25, and further discloses a computer-readable medium containing a computer program that is storable in memory and executable by a processor to configure a printer and at least one computer (see column 6 line 51-column 7 line 48).

Regarding claim 35, Yan discloses the system discussed in claim 32, and further discloses wherein the agent communicates with a manager (see column 6 line 60-column 7 line 15 and column 8 lines 1-24).

Regarding claim 36, Yan discloses the system discussed in claim 32, and further discloses wherein the applet includes printer instructions (see column 11 lines 10-14 and 31-41, column 22 lines 22-33, and column 23 lines 58-61).

Regarding claim 37, Yan discloses the system discussed in claim 32, and further discloses wherein the interface means comprises TCP/IP (see column 6 lines 52-56, column 6 line 63-column 7 line 3, column 9 line 65-column 10 line 2, and column 15 lines 62-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 20 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan as applied to claims 17 and 32 above, and further in view of U.S. Patent No. 6823504 to Sokolov.

Yan does not disclose expressly wherein the interface comprises a syntax and a syntax parser.

Sokolov discloses wherein the interface comprises a syntax and a syntax parser (see column 3 lines 23-43, column 3 line 58-column 4 line 7, and column 4 line 65-column 5 line 15).

Yan & Sokolov are combinable because they are from the same field of endeavor, interpreting and executing Java programs.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the syntax parser as described by Sokolov with the system of Yan.

The suggestion/motivation for doing so would have been to provide translation of the source code to allow execution of the instructions embedded within the source code (the use of syntax parsers are well known in the art to dissect source code so it can be translated in object code which is used by a computing system to execute the instructions).

Therefore, it would have been obvious to combine Sokolov with Yan to obtain the invention as specified in claims 20 and 33.

3. Claims 21 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan as applied to claim 17 above, and further in view of U.S. Patent No 6763499 to Friedman et al.

Yan does not disclose expressly wherein the interface comprises XML and an XML parser.

Friedman discloses wherein the interface comprises XML and an XML parser.

Yan & Friedman are combinable because they are from the same field on endeavor, interpretation and execution of source code.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the XML parser as described by Friedman with the system of Yan.

The suggestion/motivation for doing so would have been to provide translation of the source code to allow execution of the instructions embedded within the source code (the use of syntax parsers are well known in the art to dissect source code so it can be translated in object code which is used by a computing system to execute the instructions).

Therefore, it would have been obvious to combine Friedman with Yan to obtain the invention as specified in claims 21 and 34.

(10) Response to Argument

Applicant's arguments, specifically pages 7-9 of the appeal brief, regarding the rejection of claims 1-5 have been fully considered but they are not persuasive.

The applicant asserts that the reference of Yan (US 6003065) does not disclose, teach, or suggest at least "wherein a manager invokes functionality on and receives results from the application program via an agent remotely located from the application program", as recited in claim 1. The examiner respectfully disagrees as the reference of Yan does disclose such features. Particularly, with reference to Fig. 2 of Yan, the executable computer program **226** is the "application program" recited in claim 1, the virtual machine instruction processor **214** acts as the "manager" recited in claim 1, and peripheral application programming interface (API) **228** acts as the "agent" recited in claim 1. Yan states in column 9 lines 25-50 that the peripheral API **228** enables executable computer programs **226** to access functionality associated with a peripheral device, such as printer **102B**, using hardware independent and architecturally neutral system calls. These system calls correspond to specific virtual machine instructions which execute on virtual machine instruction processor **214** in the form of bytecodes and cause the peripheral device to operate in a specific manner. Essentially, the peripheral device invokes certain predetermined system calls in peripheral API **228** which in turn invokes virtual machine instructions on the virtual machine instruction processor **214** and causes the peripheral device to operate. Yan further states, in column 10 lines 25-55, that to drive a peripheral device, the application need only download an applet into the virtual machine instruction processor **214** and that, for

example, using peripheral API **228** enables a first peripheral device to request a second peripheral device to process data and return the data for further processing on the first device. Thus, it can be seen from the above citations, and the rest of the Yan reference, that virtual machine instruction processor **214** acts as the "manager" because it invokes functionality, as it executes all the calls (executable computer programs **226**, "application programs") that operate the peripheral device, and receives results from the application program, as seen in the example stated above, via a peripheral API **228** that acts as the "agent". The peripheral API **228** is the go between that allows virtual machine instruction processor **214** to execute applets or application programs that invoke functionality of a peripheral device. Further, all of the peripheral devices disclosed in Yan include processing units that contain the same elements and communication between the devices and even control over one device by another devices is possible (see column 8 lines 37-40).

Applicant's arguments regarding claims 4-31 are essentially the same as those set forth regarding claims 1-5 and therefore the examiner respectfully disagrees with the arguments for the same reasons as set forth above.

Applicant's arguments regarding claims 32-37, set forth on pages 18-24 of the appeal brief, assert that Yan does not disclose, teach, or suggest at least "wherein the remote agent initiates management events to be performed by the applet including requesting amount of resources being utilized by each applet operating on the printer. The examiner respectfully disagrees as Yan does disclose such features. Particularly, Yan discloses a query function that can be executed by peripheral APIs **228** that

determines the capabilities of a device. In the case the device is a printer, such capabilities include text and font handling, image processing, finishing options, paper tray selections, and the like. Therefore, when an option is chosen by an application, such as a particular font or image processing method, an applet is downloaded into the printer and executed by the virtual machine instruction processor **214** to operate the printer to perform the selected option. Yan further discloses that at predetermined time periods, an application running on a host computer can download applets into a peripheral device and gather very detailed information about the peripheral device, which is performed by the API (agent) of the host device. The applet can obtain information about peripheral device, such as what areas of the device need repair or are close to being depleted. In the case that the peripheral device is a printer, such information could include the amount of paper available, amount of toner or ink, etc. Thus, an applet performing image, graphics, or color processing, uses resources such as paper and toner/ink of a printing device and therefore, if information concerning the amount of paper and/or toner/ink is obtained then it can be seen that the amount of resources being utilized by the applet is attained and can be communicated to a "remote agent", the agent being the API of the host device (see column 22 line 57-column 23 line 12). Although claim 32 recites the terms "each applet", it can be seen that if only one applet is be used, such as color processing, that the amount of resources being utilized by the applet is obtained. To recapitulate, certain applets that execute on the printing peripheral, such as those applets that deal with color processing, "utilize" printer resources, such as paper, toner/ink, etc., and therefore when

information is gathered about the amount of paper available and amount of toner/ink remaining, there is a direct correlation between the applet and the amount of resources that applet utilizes.

Therefore, the rejection of claims 1-19, 22-32, and 35-37, as being anticipated by U.S. Patent No. 6003065 to Yan et al. under 35 U.S.C. 102(b), the rejection of claims 20 and 33, as being obvious over Yan in view of Sokolov (U.S. Patent No. 6823504) under 35 U.S.C. 103(a), and the rejection of claims 21 and 34, as being obvious over Yan in view of Friedman et al. (U.S. Patent No. 6763499) under 35 U.S.C. 103(a), is maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Mark R. Milia

3/30/07

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